are uniformly dispersed in a liquid medium and have an average particle size within the range of 1 to 20 μm, and

a coagulating liquid for forming the hollow fiber membrane,

to obtain a spun hollow fiber membrane; and

extracting and removing said microparticles by immersing said spun hollow fiber membrane into an extracting solution effective to dissolve said microparticles, but ineffective to dissolve said base polymer;

wherein said porous hollow fiber membrane has a permselectivity; wherein a particle cutoff is within the range of 1 to 10 μm; and wherein a pure water permeate flow is equal to or higher than 30,000 L/m^2/hr/100kPa.

BASIS FOR THE AMENDMENT

Claim 6 has been amended to include the particle cut off and water permeate flow as supported by Claim 1.

Upon entry of this amendment Claims 1-30 will now be active in this application.

Claims 10-28 stand withdrawn from further consideration as being drawn to non-elected subject matter.

REQUEST FOR RECONSIDERATION

Applicants respectfully request reconsideration of the application in view of the following remarks.

The present invention as set forth in **Claim 1** relates to a porous hollow fiber membrane obtained by a method comprising

preparing a spinning dope containing microparticles;

forming said hollow fiber membrane from said spinning dope according to a dry-wet spinning method or a wet spinning method to obtain a spun hollow fiber membrane; and

extracting and removing said microparticles by immersing said spun hollow fiber membrane into an extracting solution;

wherein said hollow fiber membrane has a permselectivity; wherein a particle cutoff is within the range of 1 to 10 μm; and wherein a pure water permeate flow is equal to or higher than 30,000 $L/m^2/hr/100kPa$.

Claim 6 relates to a method of making a porous hollow fiber membrane, comprising:

forming said hollow fiber membrane according to a dry-wet spinning method or a wet spinning method while using the following components:

a spinning dope containing a base polymer as a material for forming said porous hollow fiber membrane,

an additive for facilitating a phase separation of said spinning dope,

a solvent compatible with both, said base polymer and said additive, and

a mass of microparticles insoluble in said solvent, wherein said microparticles are uniformly dispersed in a liquid medium and have an average particle size within the range of 1 to 20 μm, and

a coagulating liquid for forming the hollow fiber membrane,

to obtain a spun hollow fiber membrane; and

extracting and removing said microparticles by immersing said spun hollow fiber membrane into an extracting solution effective to dissolve said microparticles, but ineffective to dissolve said base polymer;

wherein said porous hollow fiber membrane has a permselectivity; wherein a particle

cutoff is within the range of 1 to 10 μm; and wherein a pure water permeate flow is equal to or higher than 30,000 L/m^2/hr/100kPa.

Applicants wish to thank Examiner Fortuna for her helpful and courteous discussion with Applicants' Representative on February 4, 2003. During this discussion it was noted that the **newly cited** references, Parham et al and Stengaard, neither disclose nor suggest the claimed membrane having a **particle cutoff** of **1 to 10μm** or the claimed **water permeate flow**. In fact, Parham et al disclose a membrane having a pore diameter of **about 0.1 to about 0.7** microns (Parham et al, col. 7, lines 49 and 50) which is much smaller than the claimed particle cutoff of **1 to 10μm**. **There is no suggestion or motivation to go to a higher pore size as this would be detrimental to the filtration capability of the membrane for LDL cholesterol.** Parham et al have chosen a specific pores size so that LDL cholesterol can be filtered from whole blood. Parham et al state at col. 7, lines 41-50 as follows:

" The dimensional and porosity characteristics of the membranes of this invention are such that **LDL-C can pass through the fiber wall but most blood cells do not. Hemolysis** occurs if numerous blood cells pass through the fibers, **which is highly undesirable**.....Generally speaking, membranes can be prepared which possess a pore diameter of between about 0.1 microns to about 0.7 microns, preferably between 0.4 and 0.65 microns."

Thus, Parham et al clearly teach away from larger pore sizes as they would lead to undesirable hemolysis. If the pore size of Parham et al were increased, the membrane would be completely useless. Therefore, there cannot be any suggestion or motivation in this reference to increase the pore size.

In addition, since the membrane of Parham et al does not have the claimed pore size it **cannot have the claimed water permeate flow**. This is further shown by Comparison Example 2 at page 33 of the specification. Here a membrane with a particle cutoff of **0.85**

micron was prepared. The corresponding pure water permeate flow is only **22,000 L/m^2/hr/100kPa**, which is much lower than the **claimed** pure water permeate flow of **30,000 L/m^2/hr/100kPa**. A smaller pore size such as disclosed in Parham et al would yield an even smaller pure water permeate flow.

Stengaard does not cure these defects because it also fails to disclose or suggest the claimed membrane having a particle cutoff of 1 to 10μm or the claimed water permeate flow.

Therefore, the rejection of Claims 1-4, 6-8, 29 and 30 under 35 U.S.C. §103(a) over Parham et al and the rejection of Claims 5 and 9 under 35 U.S.C. §103(a) over Parham et al in view of Stengaard is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

With respect to the Restriction Requirement, Applicants appreciate that the Examiner has considered Claims 6-9, 29 and 30 together with Claims 1-5 in the Final Office Action. Applicants also appreciate the indication of a rejoinder of Claims 10-28 after allowability of the above Claims has been determined.

In addition, Applicants appreciate that the Examiner has sent signed copies of all IDS filed in this application by facsimile on December 20, 2002. However, with respect to the Form PTO-1449 of March 6, 2002, it appears on the facsimile copy that the second reference (U.S. 5,976,433) has not been initialed. Thus, **Applicants respectfully request that the Examiner sends another copy of Form PTO-1449 of March 6, 2002**, in which the second reference has been initialed as well.

Applicants submit that the present application is now in condition for allowance and early notice of such action is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon
Attorney of Record
Registration No.: 24,618

Kirsten A. Grueneberg, Ph.D.
Registration No.: 47,297

22850
PHONE NO.: (703) 413-3000
FAX NO.: (703) 413-2220
NFO:KAG:lcd
I:\user\KGRUN\209991.am.wpd